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FOOD EXPENDITURE AND NUTRITION.

WORKING CLASS BUDGETS, JUNE 1944.

In a previous article[1] we presented a general analysis of the expenditure of 226 families[2] that kept household accounts for the Institute of Statistics in June 1944. In this second paper we consider in some detail the outlay on food of these families and their nutritional intake, as revealed by the data of their household accounts.

1. AVERAGE EXPENDITURE ON FOOD IN 1943 AND 1944.

The relative expenditure in 1943 and 1944 on the various types of food of the *unchanged*, *changed*, and *new* families, is shown in Table XI, which also gives the absolute weekly expenditure on food in 1944, per person and per ' man,'[3] and compares this with the corresponding household expenditure. In our general survey we had already observed that for the 117 families that supplied accounts both in 1943 and in 1944, the relative increase in expenditure on food was much less than that in total outlay. This is again seen in the figures of expenditure in Table XI. When taking together the data for the unchanged and the changed families we find expenditure on food per ' man ' to have risen from 100 to 103, and total household expenditure per ' man ' from 100 to 108.

Of the several food groups for which the relative expenditure has been calculated, those of ' Potatoes ' and ' Other Vegetables and Fruit ' have experienced the largest changes, both taking up a much smaller share of total outlay in 1944 than in 1943. The explanation for this

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[1] BULLETIN Vol. 7, No. 2.
[2] Comprising 1,064 persons.
[3] Our scale of 'man' values is set out in Table XIX.

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Table XI. *Relative Expenditure on Food Groups.*

	Unchanged Families (84)		Changed Families (33)		New Families.	
					(132)[1]	(109)
	1943	1944	1943	1944	1943	1944
Bread & Cereals	14.8	16.2	15.6	15.3	15.2	15.8
Fats[2]	1.1	1.1	1.0	1.2	1.0	1.1
Meat & Meat Prod.	20.5	22.4	21.3	23.3	20.4	21.8
Fish	4.2	4.5	3.1	3.9	4.4	4.5
Dairy Produce	21.3	20.5	21.6	21.3	20.9	21.0
Groceries	7.8	9.1	7.1	9.3	7.4	8.9
Potatoes	6.3	4.6	6.7	4.8	6.1	4.7
Other Vegs. & Fruit	12.2	9.0	12.7	8.7	11.8	9.5
Other Foods[3]	11.8	12.6	10.9	12.2	12.8	12.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Food :	*Weekly Expenditure on Food and Total Expenditure.*					
per Person	9/11¼	10/5¼	10/1¼	10/3¼	10/5	11/0¼
per 'Man	13/2¼	13/6½	12/7¼	13/1¼	13/8	14/4
Total :						
per Person	19/8¾	21/8	19/10	21/4	20/10¾	23/2
per 'Man	26/1¾	28/1¼	24/8¾	27/2½	27/4¾	30/1½

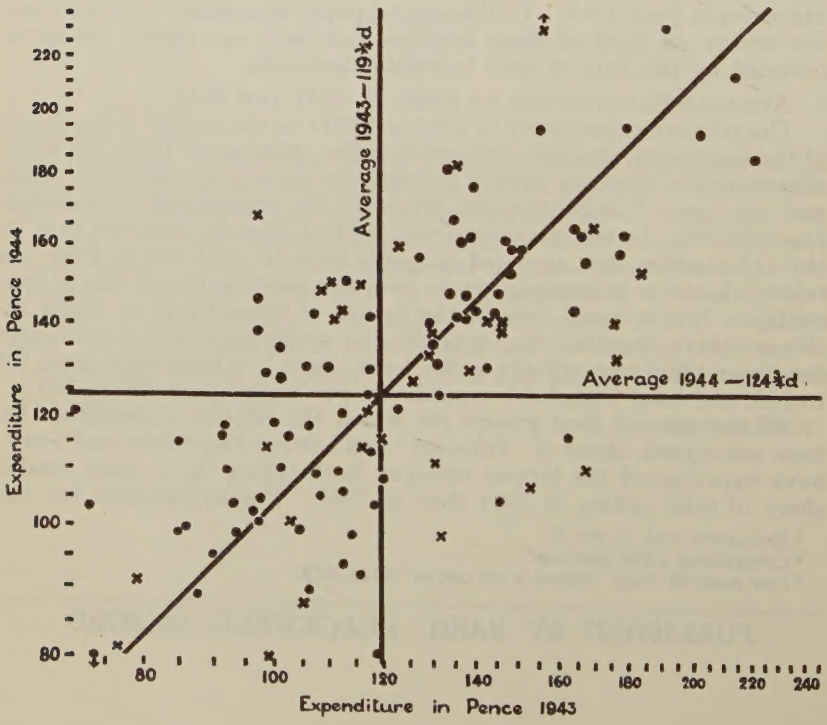
[1] Average size of family 4.7 persons, 3.6 'men'. These were *new* families in 1943; some of them are, therefore, counted twice in this Table, appearing also either under *unchanged* or *changed* families.

[2] Cooking fats only. Butter and margarine are included under Dairy Produce.

[3] Including canteen meals, meals at school, etc.

Diagram C. Changes in Expenditure on Food per Person per Week of 117 Families.

(Pence: 1943 horizontal, 1944 vertical. Logarithmic scales).
Dots signify unchanged, crosses changed families.



decline in ' weight ' is simple. Our annual survey of household expenditure always starts soon after Whitsun, which, in 1943, fell exceptionally late, so that, on the whole, the accounts were kept about four weeks later in that year than in 1944. Consequently, in 1943, people found the markets well stocked with new potatoes, vegetables, and even fruit, which was not the case in 1944. This fact stands out clearly in the data referring to these items in Table XV, which, for the two years, show very substantial differences in the quantities of new potatoes consumed and in the outlay on vegetables and fruit.[1]

2. CHANGES SINCE 1943 IN THE OUTLAY OF INDIVIDUAL FAMILIES.

(*a*) 117 *Families:* 568 *Persons.*

In spite of this seasonal fall in expenditure there was some rise in the average outlay on food of the 117 families that kept accounts in both years, and it is interesting to discover how this increase is related to the food expenditure of the individual families. A detailed picture of this is given in Diagram C, which represents the outlay on food per person per week of the 84 unchanged families and the 33 changed families, in 1943 and 1944. Since 'man' is an artificial unit and 'person' a natural one, it is preferable to employ the latter when this can be done without seriously impeding the comparability of the several groups. It is feasible in this instance, since nearly 72 per cent of the 117 families have remained unchanged in structure, although some of their members have shifted into a higher age group of our scale of ' man' values, which has slightly raised their average 'man' value per person.[2] Contrariwise for the remaining 28 per cent of *changed* families this 'man' value has slightly fallen,[3] mainly through a reduction in the relative number of male adults and an increase in that of the children under 6 years old. These shifts in the average structure of the changed families have, however, left constant the total number of persons of these families.

The averages in Diagram C were calculated by adding up the total food expenditure per week of all the 117 families, for 1943 and 1944, and dividing the sums thus obtained by the total number of persons—568 in both years.[4] The rise in the outlay on food per person from 1943 to 1944 then amounts to about 4 per cent, while, as we have seen above, it was about 3 per cent if calculated per 'man.' This rise of 4 per cent lies for all possible values of food expenditure along the diagonal in Diagram C, the cluster of families around which is noteworthy since it indicates that for a considerable number of the families expenditure on food per person changed but little from 1943 to 1944. In some instances, however, the outlay on food in 1943 and 1944 differs widely. Substantial shifts in the expenditure on food seem to result mainly from two causes : changes in income and changes in the structure of the family.[5]

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[1] The difference in the average price of new potatoes was small : in 1943, a lb. cost about 3¼d., and in 1944, it cost between 3½d. and 3¾d.

[2] From 0.75 to 0.77.

[3] From 0.80 to 0.78.

[4] The averages in Diagram C are, therefore, weighted by the number of persons per family, although, of course, no weight could be attached to the individual families, represented in that Diagram by dots and crossses.

[5] Accidental fluctuations in the weekly outlay on food owing to, say, the laying in of stocks of tinned foods or exceptional expenditure on non-food items do, of course, occur ; but when—as in virtually all the families of our sample—the housekeeping money is received weekly such fluctuations, averaged over a fortnight, are rarely large.

When adult male earners either leave home or return to the family, the family's dietetic schedule and food expenditure often undergo fundamental alterations, quite irrespective of whether or not income per person has changed much. Also, sudden shifts in income are sometimes accompanied by striking changes in the outlay on food, which frequently afford the housewife the easiest means of curtailing expenditure, or, as the case may be, indulging in luxuries that the family will appreciate. There is no need to concern ourselves here with the families that had a reasonable or fairly large expenditure on food per person in 1944 ; it seems worth while, however, to look a little more closely at those whose expenditure on food was particularly low.

(*b*) 19 *Families with Low Expenditure on Food.*

In Table XII certain data are given relating to the 19 families that, in Diagram C, show the lowest outlay on food per person in 1944. The structure of these families is broadly outlined by the number of persons and the number of dependent children. Five of the families have changed since 1943 ; in each of them a child was born since our last survey, while in family No. (5) also two adult daughters had returned home, who, in June 1944, were both supported by Public Assistance. For all these families the weekly outlay on food per person in 1944 was under 8 shillings 6 pence, and eleven of them spent less in 1944 than in 1943. The relative changes per person since 1943 in their expenditure on food and income (or, when income was not stated, household expenditure) can be read off from the indices in Table XII. Before calculating income or household expenditure per person we have deducted rent, or other costs of housing, from the total, since it represents for a family a virtually inflexible 'overhead' charge. Free meals for the children and free milk may constitute a substantial share in the diet of a poor family, but, as Table XII shows, only three of the nineteen families were entitled to free milk under the Government scheme, while three obtained meals and three milk free of charge for their children at school.[1] In four families the husband was ill; yet in one case this was not accompanied by a decline in expenditure on food, since 1943. Eight of the families cultivated a garden or allotment ; but little produce was obtained during the period of our enquiry in 1944, since it was rather early in the year.[2] Eggs from their own hens were recorded by three families : No. (1), 15 eggs per week ; No. (12), 24 eggs per week ; No. (18), 14 eggs per week.

Since most of the 19 families had a large number of children, many of whom were in receipt of Government milk,[3] we have also set out in Table XII the average amounts of milk available per person per week. These data comprise all forms of milk—fresh, condensed, and dried—in terms of fresh liquid milk. In some instances the figures are higher than one might have expected from the low total outlay on food ; yet in some others they are startlingly small, considering that for many members of these families milk is a food of vital importance.

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[1] The children of family No. (6) had free meals and milk in 1943 ; this, however, was disallowed by the school authorities when the second daughter of the family left school and became an earner like her elder sister.

[2] Mainly lettuce, spring greens, onions, radishes, and, in one case, gooseberries.

[3] One pint a day at 2d. or free, if the family income is very low.

TABLE XII.

19 Families with Low Expenditure on Food.

	Numbers in Family			Outlay on Food per Person per Week		Income (I) Househ. Exp. (H) excl. cost of housing per Person per Week			Total Milk Consumn[2] p. Person per Week	Food obtained Free per Family per Week			Nutritional Intake (Institute Scale) per 'Man' per Day		
	Persons total	Dep. 6—14	Children under 6		*Index* 1943 =*100*			*Index* 1943= *100*	pints	Milk, pints School	Milk, pints Government	School Dinners No.	Calories	Protein, grm. total	Protein, grm. *animal*
(1)	13	7	3	4/8¼	*76*	I	10/10¼	*140*	2.9	23⅔	—[3]	55	3650	103	*35*
(2)[4]	8	4	—	6/8¼	*81*	H	9/5¼	*68*	0.6	—	—	—	3150	92	*24*
(3)	6[7]	1	3	6/8½	*68*	H	11/0¼	*80*	2.9	—	—	—	3500	98	*33*
(4)[5]	14	5	5	6/9¼	*106*	H	11/6	*112*	3.4	—	35	25	3900	118	*52*
(5)[5] [6]	8[7]	2	2	7/4½	*84*	H	11/10	*94*	3.4	1⅔	14	—	2800	86	*42*
(6)	11	4	3	7/4½	*100*	H	9/4	*94*	2.8	—	21	—	3500	103	*36*
(7)	4	1	—	7/5½	*85*	H	11/1	*98*	3.8	—	—	—	2500	72	*29*
(8)[5]	8	5	1	7/5¾	*116*	I	19/-	*172*	5.9	—	—	—	3600	106	*42*
(9)	5	1	1	7/6	*80*	I	18/7	*108*	3.0	—	—	—	3100	94	*30*
(10)	7[7]	4	1	7/7¾	*84*	H	11/2½	*85*	3.9	8⅓	—	25	5050	138	*37*
(11)	8	3	—	7/11½	*106*	I	27/3¾	—[8]	2.6	—	—	—	3258	107	*27*
(12)[5]	4	1	1	8/2¼	*74*	H	18/2½	*82*	3.9	—	—	—	3750	123	*52*
(13)	3	—	1	8/2¼	*87*	H	18/4¼	*60*	5.7	—	—	—	3650	112	*35*
(14)	5	2	1	8/2¾	*105*	I	18/1¼	*112*	5.9	—	—	—	2900	90	*45*
(15)	8[7]	4	1	8/3¼	*116*	I	14/8¼	*124*	2.9	—	—	—	3250	101	*40*
(16)	6	1	2	8/3½	*96*	H	10/6	*88*	2.9	—	—	—	4650	148	*33*
(17)	10	3	3	8/3¾	*116*	H	11/6¾	*117*	2.3	—	—	—	3400	111	*37*
(18)	4	1	1	8/4¾	*104*	H	12/10	*126*	4.8	—	—	—	3650	124	*53*
(19)[6]	6	3	1	8/4¾	*98*	H	17/9½	*101*	5.3	—	—	—	3750	123	*52*

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[1] *Cf.* Table XIX.

[2] Including all Government and school milk, paid for or free of charge, tinned milk, and dried household milk.

[3] The family had 21 pints of Government milk at 2d. a pint. In addition, the three children for whom it was received had milk and three meals daily free at the nursery school, on 5½ days a week, so that there were 33 supplementary meals besides the 55 free dinners.

[4] Since June 1943, two sons joined the army and two children returned home.

[5] Child born since June 1943.

[6] Two adult daughters returned home, both supported by Public Assistance.

[7] Husband ill.

[8] Not recorded for 1943.

The nutritional intake per 'man' per day from the foods consumed by the families is given in Table XII for calories, total protein, and animal protein, all in gross values.[1] Average gross requirements per day for a 'man' doing moderately heavy work are between 3,000 and 3,300 calories and 100 grammes of protein, but individual requirements may vary widely. For three of these 19 families average calorific intake was less than 3,000 calories, and for six average protein intake was less than 100 grammes, though in one instance the deficiency was very small. Family No. (14) appears to be composed of small eaters ; their milk consumption was high, and their intake of animal protein fairly good, so that their nutrition was probably satisfactory. The same cannot be assumed for family No. (5), which—with two infants who should have each a pint per day—had a low milk consumption. It will, however, be observed from the data in Table XII that it is not the consumption of milk alone that accounts for the differences in the levels of intake of animal protein. In fact, one pint of milk per week only supplies 2.7 grammes of animal protein per day. But the housewife who appreciates the nutritional value of milk is often in general a good housekeeper who will lay out her money to the best advantage of her family.

3. CONSUMPTION OF THE MAIN RATIONED FOODS AND OF MILK.

The consumption per person of the main rationed foods and of milk is surveyed in Table XIII. The data refer to the consumption per ordinary adult ration book. With respect to meat, therefore, a child with a green ration book[2] only counts half a person, while for calculating the consumption of tea it is omitted altogether. Average consumption of cheese has been derived from the totals after deducting all special cheese rations. All the other figures in Table XIII represent uncorrected averages per person. This applies to all eggs[3] and all milk, including Government milk and school milk. There is some evidence that in many cases a child's consumption of milk is determined much more by the total amount of milk obtained by the family than by the special allowance granted for the child. This is discussed in some detail in the *Appendix*.

There was a slight increase in the consumption of butcher's meat and of cooked meat from 1943 to 1944, in terms of outlay. As regards butcher's meat this was not accompanied by an increase in quantity and only reflects an increase in average prices. Consumption of dried fruit and dried legumes went up, no doubt owing to the fact that, in 1944, there were less fresh vegetables and fruit to choose from. The jam ration had been raised from 4 ounces to 8 ounces per person per week, exchangeable for 4 ounces of sugar, if so desired.[4] Cheese had been reduced from 3 ounces to 2 ounces pea person per week. With the

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[1] The difference between 'gross' and 'net' values is discussed in Section (7), *Nutritional Intake*.

[2] *i.e.*, under 6 years old.

[3] Children with a green ration book are allowed double the adult ration. This, however, was taken up by the families only as regards eggs in shell, and the total amount of this allowance was too small to have much effect on the average figures.

[5] The other main rations in June 1944 were : sugar 8 oz., or 1 lb. of jam ; tea 2 oz.; butter (or margarine) 2 oz.; margarine 4 oz.; lard 2 oz.; cheese 2 oz.; bacon 4 oz.; meat 1/2d. worth.

TABLE XIII.

Weekly Consumption of Foods per Adult Ration Book.

	Unchanged Families		Changed Families		New Families
	1943	1944	1943	1944	1944
Meat[1]	16d.	17d.	15¾d.	16d.	17½d.
Bacon	3.8 oz.	3.7 oz.	3.7 oz.	3.8 oz.	3.8 oz.
Tot. Rat. Fats[2]	8.1 oz.	8.0 oz.	8.0 oz.	8.0 oz.	8.1 oz.
Butter only	*2.0 oz.*	*2.0 oz.*	*2.0 oz.*	*2.0 oz.*	*2.0 oz.*
Unrat. Fats[3]	0.3 oz.	0.3 oz.	0.2 oz.	0.4 oz.	0.4 oz.
Tea	2.0 oz.	2.0 oz.	1.8 oz.	2.1 oz.	2.0 oz.
Sugar	9.7 oz.	8.4 oz.	9.0 oz.	8.6 oz.	8.8 oz.
Jam	3.0 oz.	5.2 oz.	3.4 oz.	5.2 oz.	5.5 oz.
Cheese	2.4 oz.[4]	1.9 oz.[4]	2.7 oz.[5]	1.9 oz.[5]	2.0 oz.[4]
Eggs, shell[6]	1.0 egg	1.4 egg	1.1 egg	1.4 egg	1.1 egg
Eggs, dried[7]	1.0 egg	1.1 egg	0.9 egg	1.5 egg	1.4 egg
Foods Rationed on Points:					
Cooked Meat[8]	0.6 oz.	1.6 oz.	0.4 oz.	1.5 oz.	1.7 oz.
Tinned Meat[9]	¼d.	¼d.	½d.	¼d.	½d.
Tinned Fish	½d.	¾d.	¾d.	¾d.	¾d.
Tinned Peas and Beans	¾d.	½d.	¾d.	½d.	½d.
Cereals[10]	2.1 oz.	2.4 oz.	2.0 oz.	2.1 oz.	2.9 oz.
Dried Legumes	0.5 oz.	1.5 oz.	0.8 oz.	1.1 oz.	1.0 oz.
Dried Fruit	1.4 oz.	1.9 oz.	1.2 oz.	2.0 oz.	1.8 oz.
Syrup and Treacle	0.9 oz.	1.0 oz.	0.5 oz.	1.2 oz.	1.2 oz.
Milk, total[11]	4.5 pt.	4.5 pt.	4.3 pt.	4.5 pt.	4.8 pt.
Of this:					
Ordinary	*2.5 pt.*	*2.8 pt.*	*2.9 pt.*	*2.9 pt.*	*3.1 pt.*
Government paid	*0.9 pt.*	*0.8 pt.*	*0.5 pt.*	*0.4 pt.*	*1.0 pt.*
Ditto, free	*0.2 pt.*	*0.1 pt.*	*0.2 pt.*	*0.3 pt.*	—
School, paid	*0.6 pt.*	*0.5 pt.*	*0.6 pt.*	*0.7 pt.*	*0.6 pt.*
Ditto, free	*0.1 pt.*	*0.1 pt.*	—	—	—
Tinned[12] and Household	*0.2 pt.*	*0.2 pt.*	*0.1 pt.*	*0.2 pt.*	*0.1 pt.*

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[1] Including offals.

[2] Butter, margarine, lard, cooking fat.

[3] Suet and dripping.

[4] Excluding 3 special rations.

[5] Excluding 6 special rations.

[6] The figures refer to consumption per person. No correction has been made for special allowances for children and expectant and nursing mothers. The following numbers of eggs from own hens are included : Unchanged Fam., 1943—0.1 ; 1944—0.3 ; Changed Fam., 1943—0.2 ; 1944—0.4 ; New Fam., 1944—0.2.

[7] One packet of dried eggs equivalent to 12 eggs in shell.

[8] Including small quantities of unrationed cooked meat.

[9] This group overlaps with the preceding one. It also includes tinned mixtures of meat and vegetables.

[10] Rice and ready-to-eat breakfast cereals. Also including small quantities of unartioned semolina, maccaroni, etc., but excluding rolled oats.

[11] All the figures under this heading refer to consumption per person. No correction has been made for special allowances of Government milk and School milk.

[12] Rationed on points. The combined figures for tinned and Household milk are given in terms of fresh milk.

TABLE XIV.

Distribution of Purchases of Certain Foods.

	No. of Purchasing Families as % of Whole Group.					Unit	Purchasing Famlies : Consumption p. Family p. Week.					All Families : Consumption per per Family per Week				
	Unchanged 1943	Unchanged 1944	Changed 1943	Changed 1944	New 1944		Unchanged 1943	Unchanged 1944	Changed 1943	Changed 1944	New 1944	Unchanged 1943	Unchanged 1944	Changed 1943	Changed 1944	New 1944
Fish	81	82	67	70	80	oz.	24.3	27.3	21.8	31.8	28.6	19.7	22.5	14.5	22.2	22.8
Fish, tinned	43	43	42	39	40	d.	7	9	8¾	9½	8¾	3	4	3¾	3¾	3½
Meat, cooked	49	71	42	76	79	oz.	6.0	10.5	5.0	10.0	9.9	2.9	7.5	2.1	7.5	7.8
Meat, tinned	17	13	15	15	18	d.	9¾	9	18¾	7	9¼	1½	1¼	2¾	1	1¾
Eggs, dried[1]	45	51	55	67	61	egg[3]	10.7	9.8	8.8	11.7	10.8	4.8	5.0	4.8	7.8	6.6
Milk, tinned	35	32	30	27	29	tin	1.1	1.0	0.7	1.1	0.8	0.4	0.3	0.2	0.3	0.2
Milk, Household[2]	13	17	12	12	11	pt.[3]	2.9	3.1	3.0	3.5	2.5	0.4	0.5	0.4	0.4	0.3
Dried Legumes	21	48	24	42	33	oz.	10.4	15.1	17.0	13.1	13.4	2.2	7.2	4.1	5.6	4.4
Rolled Oats and Oatmeal	18	17	21	24	20	oz.	22.4	21.4	25.4	16.5	20.5	4.0	3.6	5.4	4.0	4.1
Biscuits	60	70	58	52	63	oz.	12.0	10.3	10.5	9.2	11.1	7.2	7.2	6.1	4.7	7.0
Cocoa	46	38	30	36	39	oz.	4.4	4.9	4.2	4.3	4.4	2.0	1.9	1.3	1.6	1.7
Dried Fruit	55	61	64	76	67	oz.	12.0	14.6	10.0	13.5	12.2	6.5	8.9	6.4	10.2	8.2
Syrup and Treacle	27	30	15	36	34	oz.	15.3	16.3	17.6	17.0	15.8	4.2	4.9	2.7	6.2	5.4

[1] One packet equals 12 eggs in shell.

[2] One tin equals 4 pints of skimmed milk.

[3] Equivalent.

exception of this latter item average consumption of the main foods seems to have been well maintained and even slightly increased, since 1943.

(4) THE DEMAND FOR FOODS RATIONED ON 'POINTS.'

In laying out her points the housewife must choose between a wide variety of foods. What she decides to buy depends not only on her relative preference for the foods thus rationed but also on the availability of, and her likes and dislikes for, certain other foods that can act as substitutes. Small changes in relative prices do not appear to affect her choice significantly. A number of foods, some rationed on points, some specifically rationed (dried eggs and household milk), and some unrationed (wet fish and cocoa), are shown in Table XIV. The Table gives the percentages of the families in each group that bought a certain food and the average quantities purchased or, where that is not possible, the average outlay. Here again, the increased consumption of cooked meat, dried legumes, and dried fruit, in 1944, is evident. Dried eggs, too, were in greater demand in 1944 than in 1943 ; but, in general, less than half the allowance was taken up, which—disregarding the special allowance for children with a green ration book—was 14.1 eggs per week per average family of 4.7 persons. On the whole the data in Table XIV convey the impression that there exists for the several foods a fairly well stabilised relative demand.

(5) THE MAIN UNRATIONED FOODS.

Table XV compares the consumption of the main carbohydrate foods, the two meat ' substitutes '—fish and sausages—, and of fresh vegetables and fruit, in 1943 and 1944. It seemed possible that the seasonally enforced lower expenditure in 1944 on spring vegetables and fresh fruit might have its counterpart in an increased demand for such other semi-luxuries as cake and buns. There was, in fact, some increase in outlay owing to an increased consumption of cake ; but fewer buns were eaten, with the result that total average consumption of cake, buns, and biscuits, remained about constant.

The somewhat larger consumption of fish and sausages in June 1944 as compared with June/July 1943 indicates, most likely, an increase in supply ; there was probably still a substantial margin of unsatisfied demand for these foods, at the average prices ruling in June 1944. Higher figures of consumption of potatoes in early June 1944 than in June/July 1943 were to be expected, since at that time of the year old potatoes have a much larger amount of wastage than new ones. But average consumption of potatoes was also higher for 1944 than it had been in 1942, when our inquiry fell at about the same time of the year. This in conjunction with the slight upward trend in the consumption of bread and flour, suggests that people were perhaps a little less economical in the use of these foods than they had been in previous years.

(6) OUTLAY ON RATIONED AND UNRATIONED FOODS. MEALS AWAY FROM HOME.

Expenditure on the several groups of rationed and unrationed foods is analysed in Table XVI. The outlay on specifically rationed foods had

TABLE XV.

Weekly Consumption of the Main Carbohydrate Foods and of Fish, Sausages, and Fresh Fruit and Vegetables.

	Unchanged Families				Changed Families				New Families	
	per Person		per 'Man'		per Person		per 'Man'		per Person	per 'Man'
	1943	1944	1943	1944	1943	1944	1943	1944	1944	
	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz
Bread	61.7	69.5	81.8	90.2	63.1	59.6	78.7	76.0	68.6	89.2
Flour	8.4	7.6	11.1	9.8	9.7	10.2	12.0	13.0	6.9	9.0
Cake, Buns, Biscuits	8.0	8.8	10.7	11.5	9.1	7.9	11.4	10.1	10.5	13.6
Potatoes, old	22.2	60.6	29.6	78.7	19.0	47.6	23.8	61.0	55.8	72.5
Potatoes, new	30.4	7.1	40.5	9.2	33.0	12.2	41.3	15.7	11.0	14.3
Rolled Oats and Oatmeal	0.8	0.8	1.1	1.0	1.1	0.8	1.3	1.0	0.9	1.2
Fish	4.2	4.7	5.5	6.1	2.8	4.3	3.5	5.5	5.0	6.5
Sausages	3.0	3.5	3.9	4.6	4.0	4.0	5.0	5.2	3.7	4.8
	d.	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
Fresh Fruit and Vegetables (excluding potatoes)	13½	9½	18	12¼	14¼	9	17¾	11½	11	14¼

TABLE XVI.

Expenditure on Rationed and Unrationed Foods.

per 'Man per Week.

	Unchanged families		Changed families		New families
	1943	1944	1943	1944	1944
(1) Specifically Rat. Foods[1]	4/5	4/7¾	4/3¼	4/8½	4/9½
(2) Point Rat. Foods	8¼	1/0¼	7¼	10½	1/1
(3) All Milk[2]	1/8	1/8¼	1/7¼	1/8	1/10¾
(4) Bread, Flour Potatoes	1/11¾	1/10½	2/-	1/9¼	1/11
(5) Fresh Fruit and Vegetables	1/6	1/0¼	1/5¾	11½	1/2¼
(6) Other Foods[3]	2/11¼	3/3½	2/7¾	3/1½	3/5½
(1)—(6)	13/2¼	13/6½	12/7¼	13/1¼	14/4

[1] Including all meat offals.

[2] Including Household milk and condensed, etc., tinned milk, the former belonging properly to Group (1) and the latter to group (2).

[3] Including wet fish and kippers, sausages, cake and buns, cocoa, unrationed fats, fancy foods, meals bought away from home.

slightly risen mainly owing to the increased purchases of jam. The relatively steep increase in the expenditure on ' points ' foods must not be taken to imply that, in this group, people bought dearer foods in 1944 than in 1943. On the contrary, the indication is rather that they were laying out their points more economically so that they went further, since, in general, 'points' foods that are relatively expensive in terms of money are even more so in terms of 'points.' What was spent less on fresh vegetables and fruit in 1944 as compared with 1943, was spent more on additional purchases of other unrationed foods. The food group (6) in Table XVI embraces a medley of such foods, from wet fish and sausages to cake and buns, fancy foods, and condiments. It also includes all meals taken away from home for which the outlay was given in the household accounts. Most of these meals were luncheons or dinners, at an average price of about one shilling per adult and 5 pence per child.

The figures in Table XVII indicate that demand for these meals had slightly increased, although average weekly consumption was little

TABLE XVII.

Luncheons and Dinners away from Home.

Group of Families	No. of Meals per Week			Av. Price p. Meal bought	
	per Adult	per Child		Adult	Child
		bought	free	d.	d.
Unchanged					
1943	1.12	0.87	0.32	12¼	5
1944	1.32	0.77	0.37	13	5¼
Changed					
1943	0.81	1.11	0.19	10½	5¼
1944	0.90	1.16	0.44	11	5½
New					
1944	1.05	1.12	0.09	12½	5

more than one meal per person over 14 years old and one meal per child up to the age of 14 years. The figures would, of course, be somewhat higher if we had deducted from these two age groups all the housewives that were non-earners and all the infants that did not attend a nursery school.

(7) Nutritional Intake.

The average nutritional intake available from the foods that were consumed by the three groups of families will be found in Table XVIII.

Table XVIII

Nutritional Intake per 'Man' per day.

	Institute Scale (Gross Values)			Ministry of Health Scale (Net Values)		
	Calories	Protein grammes		Calories	Protein grammes	
Average Requirements	3300	100		3000	70	
Intake:						
Unchanged		total	animal		total	animal
Families 1943	3450	107	51	3200	85	38
1944	3600	115	51	3300	88	38
Changed						
Families 1943	3250	103	47	3000	82	36
1944	3400	107	51	3150	86	38
New Families						
1944	3700	117	54	3400	93	41

The scales of 'man' values used for the calculation of this intake are given in Table XIX. The Institute of Statistics scale is that employed throughout this survey for reducing to a common denominator the household expenditure on all items—food and non-food—of the different families. For that purpose we require a standard measure that is simple to apply. The one chosen by us cannot claim to be an instrument of precision; nevertheless it represents a useful standard for our comparisons. Obviously, for the assessment of the nutritional intake only, the Ministry of Health scales are to be preferred. Yet it will be seen that the calculations by means of our scale stand in a reasonable relation to those based on the Ministry of Health scales. It should be observed that these latter figures of nutritional intake per 'man' refer to *net* intake of

Table XIX.

Scales of 'Man' Values.

Institute of Statistics Scale	
Adults and Juveniles:	
Male, 14 +	1.00
Female, 14 +	0.85
Children:	
10—14	0.70
6—9	0.60
3—5	0.50
Under 3	0.33

Ministry of Health Scale	Calories	Protein
Age Groups:		
21 +, male	1.00	1.00
21 +, female	0.83	0.86
17—21	1.00	1.29
15—17	1.00	1.43
12—15	0.97	1.36
7—12	0.70	0.93
3—7	0.50	0.71
1—3	0.37	0.60
6—12 months	0.27	0.33
0—6 months	0.20	0.26

nutrients, while the former show *gross* values, as bought. This difference in calculation arises from the fact that when we started this series of surveys, in spring 1940, the Ministry of Health schedule of nutritional contents of the several foods had not yet been evolved, and we had to select one from those that were in use before the war, and which nearly all gave gross values. In order to maintain continuity with the data in our previous surveys we adhere to our schedule of gross values in conjunction with the Institute scale of 'man' values.

From the figures in Table XVIII it appears that while the intake of animal protein has remained about constant, that of calories and vegetable protein has slightly increased, from 1943 to 1944. Part of this increase is obviously due to the increased consumption of certain foods, such as dried legumes, dried fruit, and jam; some of it, however, may be apparent rather than real since it results from the larger figures of consumption of potatoes without making allowance for a higher proportion of wastage in 1944 than in 1943.

(8) CONCLUSION.

From the data of food expenditure and food consumption of the 226 household accounts collected in June 1944 it appears that, on the average, the standard of nutrition had been well maintained, since 1943, at an increase in outlay of between 3 and 4 per cent. This slight increase probably represents mainly the price paid for certain dietetic—as distinct from nutritional—improvements, such as slightly better meat, and more cake and jam. Since, in 1944, the season for spring vegetables and fresh fruit was less advanced than in 1943, people obtained fewer early vegetables and very little fruit. In compensation, the housewives bought more of certain other foods that help to introduce variety into the diet, especially of dried legumes and dried fruit. It also appears that they were able to obtain some more sausages, cooked meat, and fish in 1944 than in 1943, although, as far as we can judge, the increased supply was too small to have any substantial effect on the average intake of animal protein.

T. SCHULZ.

APPENDIX.

DOMESTIC CONSUMPTION OF FRESH MILK.

In view of the important role that milk plays in the human diet, more especially that of children, it seemed worth while to try and obtain a somewhat detailed picture of the consumption of milk of individual families. Average milk consumption per person of the unchanged, changed and new families, as shown by the data in Table XIII, appear satisfactory under war-time conditions. As regards average domestic consumption of ordinary liquid milk—excluding milk supplied under the Government scheme—the quantities ranged for the three groups from 2.8 pints per person per week to 3.1 pints. These smooth averages, however, conceal considerable differences in actual consumption, as a glance at Tables 1*a*, 1*b*, 1*c*, and 2, will show.

In order to obtain the data for these Tables we have subdivided the 226 families that kept household accounts in 1944, into two groups,

TABLE 1a

131 Families with no Children under 6.

Domestic Consumption of Fresh Milk per Person per Week (Figures in columns: heavy type, total No. of families; below, average Nos. per family of persons over 14, children 6—14).

Food p. 'Man'p. week	under 2 pints	2 pints +	3 pints +	4 pints +	5 pints +	6 pints and over
Under 10s.	**2** 3.5 ; 3.5	**2** 4.5 ; 2.5	**1** 3.0 ; 1.0	—	—	—
10s. +	**1** 2.0 ; 2.0	**1** 3.0 ; 3.0	**4** 3.0 ; 1.8	—	—	—
11s. +	—	**2** 2.5 ; 2.0	**6** 3.2 ; 2.0	**2** 3.5 ; 1.0	—	**1** 3.0 ;
12s. +	**1** 2.0 ; 2.0	**3** 3.7 ; 1.3	**11** 3.2 ; 1.8	**3** 2.7 ; 2.3	**4** 2.0 ; 1.8	—
13s. +	—	**5** 1.8 ; 1.6	**8** 3.1 ; 1.8	**4** 2.8 ; 1.8	**1** 2.0 ; —	**3** 3.3 ; 0.7
14s. +	—	**7** 2.3 ; 2.4	**6** 2.8 ; 1.7	**4** 3.0 ; 1.3	**2** 2.5 ; 1.0	—
15s. +	—	**2** 3.5 ; 2.5	**4** 2.5 ; 2.0	**7** 2.9 ; 1.0	—	**1** 2.0 ; 1.0
16s. +	—	**2** 2.0 ; 3.0	**5** 3.0 ; 1.8	**4** 1.8 ; 2.0	**2** 2.5 ; 1.5	**1** 2.0 ; 1.0
17s. +	—	**1** 4.0 ; 1.0	—	**3** 2.0 ; 1.0	**1** 2.0 ; 2.0	**1** 2.0 ; 3.0
18s. +	—	**2** 2.0 ; 1.0	**1** 2.0 ; 1.0	**1** 2.0 ; 1.0	—	**1** 2.0 ; 1.0
19s. and over	—	**1** 2.0 ; 2.0	**1** 1.0 ; 2.0	**2** 3.0 ; 1.0	**2** 2.5 ; —	**2** 2.0 ; 0.5
	4 2.8 ; 2.8	**28** 2.6 ; 2.0	**47** 3.0 ; 1.8	**30** 2.6 ; 1.4	**12** 2.3 ; 1.2	**10** 2.5 ; 0.9

TABLE 1b

95 Families with Children under 6.

Domestic Consumption of Fresh Milk including Government Milk per Person per Week (Figures in columns: heavy type, total No. of families; below, av. Nos. per family of persons over 14; children 6—14; children under 6).

Food p. 'Man' p. week	under 2 pints	2 pints +	3 pints +	4 pints +	5 pints +	6 pints and over
Under 10s.	**2** 2.5 : 5.0 ; 2.0*a*	—	**3**[1] 2.7 ; 1.0 1.0	—	—	—
10s. +	—	**3** 3.3 ; 2.3 ; 2.7	**1** 4.0 ; 5.0 ; 5.0	**1** 2.0 ; 3.0 ; 1.0	**1** 2.0 — 1.0	—
11s. +	**2** 3.5 ; 3.5 ; 1.0	**3** 3.0 ; 2.7 ; 2.0*b*	**7**[2] 2.9 ; 2.4 ; 1.1	**3** 2.0 ; 1.3 ; 1.3	**1** 2.0 ; — 2.0*c*	—
12s. +	—	**5** 3.2 ; 2.6 ; 1.8	**3**[3] 2.3 ; 2.0 ; 1.0	**4** 2.5 ; 1.0 ; 1.3	**2** 2.0 ; 0.5 ; 2.0	—
13s. +	—	**2** 2.5 ; 2.0 ; 1.0	**3** 2.7 ; 1.0 ; 1.7	—	**2** 2.0; 0.5 ; 2.0	**1** 2.0 ; — 2.0
14s. +	—	—	**2**[4] 2.0 ; 4.5 ; 1.0	**2** 3.0 ; 2.5 ; 1.0	**1** 2.0 ; — 2.0	**1** 2.0 ; — 1.0
15s. +	—	—	—	**6**[5] 2.0 ; 1.2 ; 1.7	**2** 2.0 ; 0.5 ; 1.0	**1** 1.0 ; — 2.0
16s. +	—	—	**1** 2.0 ; — 1.0	**4**[6] 2.0 ; 0.8 ; 1.5	**4** 2.0 ; 0.8 ; 1.0	**1**[8] 2.0 ; — 1.0
17s. +	—	—	—	—	**3** 1.7 ; — 1.3	**2** 1.5 ; 1.0 ; 1.0
18s. +	—	—	—	—	**3** 2.0 ; 0.3 ; 1.0	**5** 2.0 ; 0.8 ; 1.2
19s. and over	—	—	**1** 2.0 ; — 2.0	**2**[7] 2.0 ; 0.5 ; 1.5	**2** 2.0 ; — 1.0*d*	**3**[9] 2.0 ; 0.7 ; 1.0
	4 3.0 ; 4.3 ; 1.5*e*	**13** 3.1 ; 2.5 ; 1.9*f*	**21** 2.6 ; 2.0 ; 1.4	**22** 2.2 ; 1.2 ; 1.4	**21** 2.0 ; 0.3 ; 1.3*g*	**14** 1.9 ; 0.6 ; 1.2

Average no. per family of infants at day nurseries : (*a*) 2.0 ; (*b*) 0.3 ; (*c*) 1.0 ; (*d*) 1.0 ; (*e*) 1.0 ; (*f*) 0.07 ; (*g*) 0.14.
Ostermilk and similar infant milk foods bought per week (one family in each instance) : [1] 2/6 ; [2] 2/6 ; [3] 5/- ; [4] 2/2 ; [5] 5/9 ; [6] 4/2 ; [7] 5/- ; [8] 2/4 ; [9] 5/6.

TABLE 1c

95 Families with Children under 6.

Domestic Consumption of Fresh Milk per Person per Week excluding Government Milk and children receiving it : All children under 6.
(Figures in columns: heavy type, total No. of families; below, average Nos. per family of persons over 14; children 6—14; children under 6.)

Food p. 'Man' p. Week	No Ordinary Fresh Milk	under 2 pints	2 pints +	3 pints +	4 pints +	5 pints +	6 pints & over
Under 10s.	**1** 3.0 ; 7.0 ; 3.0*a*	**1** 2.0 ; 3.0 ; 1.0*b*	**3**[1] 2.7 ; 1.0 ; 1.0	—	—	—	—
10s. +	**1** 2.0 ; 1.0 ; 3.0	**3** 4.0 ; 3.7 ; 3.3	—	—	**1** 2,0 ; 3.0 ; 1.0	**1** 2.0 ; — 1.0	—
11s. +	**1** 4.0 ; 3.0 ; 3.0	**6** 2.7 ; 2.3 ; 1.5*c*	**3**[2] 3.0 ; 1.0 ; 1.0	**5** 2.6 ; 3.2 ; 1.0	**1** 2.0 ; — 2.0*d*	—	—
12s. +	**2** 2.5 ; 2.5 ; 2.5	**3** 3.7 ; 2.7 ; 1.3	**2** 2.5 ; 1.5 ; 1.0	**4**[4] 2.0 ; 1.5 ; 1.3	**3** 2.7 ; 0.7 ; 1.7	—	—
13s. +	**1** 2.0 ; — 2.0	**3** 3.0 ; 1.7 ; 1.3	**1** 2.0 ; 2.0 ; 1.0	**1** 2.0 ; — 3.0	**1** 2.0 ; 1.0 ; 1.0	—	**1** 2.0 ; — 2.0
14s. +	—	—	**2**[3] 2.0 ; 3.0 ; 1.0	**2** 3.0 ; 4.0 ; 1.0	—	—	**2** 2.0 ; — 1.5
15s. +	—	**1** 1.0 ; — 2.0	—	**5**[5] 2.2 ; 1.4 ; 1.6	**3** 1.7 ; 0.3 ; 1.3	—	—
16s. +	—	—	**3** 2.0 ; 0.3 ; 1.3	**2**[6] 2.0 ; 1.0 ; 1.0	**3** 2.0 ; 0.7 ; 1.3	**1** 2.0 ; 1.0 ; 1.0	**1**[8] 2.0 ; — 1.0
17s. +	—	—	—	—	**3** 1.7 ; — 1.3	**1** 1.0 ; 2.0 ; 1.0	**1** 2.0 ; — 1.0
18s. +	—	—	—	—	**2** 2.0 ; — 1.0	**1** 2.0 ; 1.0 ; 1.0	**5** 2.0 ; 0.8 ; 1.2
19s. and over	—	**1** 2.0 ; — 2.0	—	**1** 2.0 ; — 2.0	**3**[7] 2.0 ; 0.3 ; 1.0*e*	**2** 2.0 ; 0.5 ; 1.0;	**1**[9] 2.0 ; 1.0 ; 1.0
	6 2.7 ; 2.7 ; 2.7*f*	**18** 2.9 ; 2.3 ; 1.8*g*	**14** 2.4 ; 1.3 ; 1.1	**20** 2.3 ; 2.0 ; 1.4	**20** 2.0 ; 0.5 ; 1.3*h*	**6** 1.8 ; 0.8 ; 1.0	**11** 2.0 ; 0.5 ; 1.3

Average number per family of infants at day nurseries : (*a*) 3.0 ; (*b*) 1.0 ; (*c*) 0.2 ; (*d*) 2.0 ; (*e*) 0.3 ; (*f*) 0.5 ; (*g*) 0.1 ; (*h*) 0.14.
Ostermilk and similar infant milk foods bought per week (one family in each instance) : [1] 2/6 ; [2] 2/6 ; [3] 2/2 ; [4] 5/- ; [5] 5/9 ; [6] 4/2 ; [7] 5/- ; [8] 2/4 ; [9] 5/5.

the one consisting of 131 families with no children under 6 years old, and the other consisting of the remaining 95 families with children below that age. A child over 5 years old was allotted to the age group 6 to 14 years if its green ration book, which entitles it to a pint of milk a day under the Government scheme,[1] had already been exchanged for a juvenile ration book, while if it still obtained the special milk allowance it was placed in the group of under 6 years old. Thus, all the children in that latter group in Tables 1*b* and 1*c* were in receipt of Government milk. In Table 1*b*, the average milk consumption per family has been found by including all Government milk into the domestically consumed fresh milk and then calculating the amount available per person per week. In Table 1*c*, Government milk has been excluded, and the ordinary fresh milk bought per week divided by the total number of persons per family *minus* the children receiving Government milk, i.e., *minus* all the children under 6 years old. In Tables 1*a*, 1*b*, and 1*c*, the figures in heavy type denote the total number of families in each of the food expenditure and milk consumption groups, while the figures below show the average structure per family, the first giving the average number of persons over 14 years old, the second that of the children ranging from 6 to 14 years, and the third (Tables 1*b* and 1*c*) that of the children under 6 years old. The footnotes in Tables 1*b* and 1*c* indicate the average number of infants at day nurseries, where they have daily three meals and milk, on 5½ days a week, and, further, the outlay on such milk preparations for infants that replace fresh milk. In those cases where the mother obtained National dried milk for her infant instead of fresh liquid milk, we have converted the amount of dried milk into terms of liquid milk and counted it as Government milk. There were amongst the 131 families with no children under 6 years old three expectant mothers receiving Government milk. They all belonged to families with a rather high consumption of milk, none of them having less than 3 pints per person per week, excluding the Government milk. In order to avoid unnecessary complications we have in these three instances completely disregarded the Government milk, since it was almost certainly consumed by the women to whom it was allotted.

That no similar assumption can generally be made in the case of infants is obvious from the picture supplied by Tables 1*b* and 1*c*. Out of 95 families, six, with 16 infants and 16 children of school age, had no milk beside that allowed for the infants under the Government scheme, and 18 families, with 41 children of school age and 32 infants, bought on the average for each person over 6 years old, about 1½ pints per week. Five infants of these two groups attended day nurseries; but no additional milk food was bought by any of these families.

The three Tables 1*a*, 1*b*, and 1*c*, seem to confirm the frequently made assumption that milk tends to be considered a luxury food by the poorer family. There is, no doubt, some truth in that, but it would almost certainly be false to believe that it is only poverty which prevents a family from buying more milk. For one thing, our data themselves contradict that; there are families with a relatively low average expenditure on

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[1] At a cost of 2d. per pint, or free of charge, if the family falls below a certain income level.

TABLE 2.

Domestic Consumption of Fresh Milk per Person per Week.

	Whole Group No.	Whole Group %	No Ordinary Fresh Milk % of whole group	Under 2 pints + % of whole group	2 pints + % of whole group	3 pints + % of whole group	4 pints + % of whole group	5 pints + % of whole group	6 pints and over % of whole group
(a) Families with No Children under 6.									
Families	*131*	100.0	—	3.0	21.4	35.9	22.9	9.2	7.6
Persons over 14	*355*	100.0	—	3.1	20.9	39.1	22.3	7.6	7.0
Children 6—14	*217*	100.0	—	5.1	26.3	38.7	19.3	6.5	4.1
(b) Families with Children under 6. Government Milk included as ordinary Milk.									
Families	*95*	100.0	—	4.2	13.7	22.1	23.2	22.1	14.7
Persons over 14	*222*	100.0	—	5.4	18.0	24.8	21.6	18.5	11.7
Children 6—14	*134*	100.0	—	12.7	23.9	32.1	20.1	5.2	6.0
Children under 6	*136*	100.0	—	4.4	18.4	21.3	22.8	20.6	12.5
(c) Families with Children under 6. Excluding Government Milk and Children receiving it: All Children under 6.									
Families	*95*	100.0	6.3	18.9	14.7	21.1	21.1	6.3	11.6
Persons over 14	*222*	100.0	7.2	23.9	15.3	20.7	18.0	5.0	9.9
Children 6—14	*134*	100.0	12.0	30.6	13.4	29.1	7.5	3.7	3.7
Children under 6	*136*	100.0	11.8	23.5	11.0	19.9	19.1	4.4	10.3

food that bought considerable quantities of milk, and there are others with a fairly high average outlay that bought very little milk. In many cases where it occurs, a low consumption of milk reflects the housewife's distrust in its nutritional value. If one scans the household accounts of such families one finds very often a substantial expenditure on meat and meat products, fish and chips, and cake and buns, and a very small one not only on milk but also on vegetables, except potatoes and, perhaps, tinned beans.

Table 2 summarizes the findings which are given in detail in Tables 1*a*, 1*b*, and 1*c*, by showing the proportion of families, persons over 14 years old, children between 6 and 14 years, and infants, within the several ranges of average milk consumption. There can be little doubt that about 35 per cent of the 136 infants entitled to Government milk did not receive their full share, and 12 per cent probably very little indeed. The families with these 45 infants had also 57 of the 134 children between 6 and 14 years old, *i.e.* nearly 43 per cent of all the children of this latter age group. Many of the children of school age have, of course, milk at school, but by no means all of them. In fact, there is some indication that the lower a family's domestic consumption of fresh milk the greater the chance that its children drink no milk at school if they have to pay for it. Even when they can afford it, they are not sufficiently accustomed to the taste of milk to be willing to spend a halfpenny on a third of a pint.

THE FOREIGN TRADE OF WEST-EUROPEAN COUNTRIES, II.

In the present article some additional data are presented on the mutua! trade relations between six Western European countries, namely, Belgium-Luxemburg, Denmark, France, Norway, the Netherlands, the United Kingdom and associated overseas territories. In order to investigate changes in these relations comparative data are given for the years 1928 and 1938.

A first crude indication of changes in the trade between the six countries can be derived from the trade balances. With the exception of Belgium-Luxemburg trade balances of each country with the whole group diminished, and the same is true for most of the individual balances. The U.K. had a passive balance of trade with the group amounting to 1,025 million new gold $ in 1928 and to 286 million in 1938. The greatest deficit within the group occurred in the trade of the U.K. with Denmark. Norway also had a deficit in her trade with the group, although much smaller than the U.K. The other countries had active balances, Holland on account of her trade with thee U.K.

TABLE I.

Trade Balance vf Western European Countries.

Million New Gold Dollars.

	Belg-Lux.		Denmark		France		Norway		Holland		U.K.	
	1928	1938	1928	1938	1928	1938	1928	1938	1928	1938	1928	1938
Balance with :												
Belg.-Lux.	...	...	— 17	— 3	+260	+29	— 4	— 4	—87	—31	—215	— 52
Denmark	+ 13	+ 2	...	...	+ 14	+ 2	—21	— 7	+18	— 3	—354	—107
France	—129	+ 1	— 24	0	...	...	+ 2	+ 5	+ 1	— 3	—261	— 35
Norway	— 4	+ 3	+ 18	+ 1	— 6	— 2	...	...	+15	+ 2	— 29	— 15
Holland	+ 20	+18	— 26	— 8	— 24	+ 5	—21	— 8	...	...	—166	— 77
U.K.	+ 87	+39	+307	+64	+172	+11	— 9	—14	+123	+65	...	...
Total	— 13	+63	+258	+54	+416	+45	—53	—28	+70	+30	—1025	—286

The fact that trade balances are smaller in 1938 than in 1928 is partly due to the shrinkage in the value of trade, which is accentuated by using the new gold $ for conversion purposes, and partly to the higher degree of mutual balanced trading.

In order to eliminate the effect of the reduction in the total value of trade on the balances, the surplus or deficit on merchandise trade has, in Table II, been expressed as a percentage of total trade. If the surplus or deficit is 20% of the aggregate import and export transactions the degree of mutual trading is given as 100 minus 20=80%.[1] For this purpose the formulae $\frac{2I}{I+E}$[2] in the case of export surpluses and $\frac{2E}{I+E}$ in the case of import surpluses have been used (no values above 100 are possible).

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[1] This measure is similar to that used by the League of Nations in the World Economic Survey of 1935/36.

[2] I=Imports and E=Exports. For instance, in 1928 Belgium imported $170 million from and exported $257 million to U.K. Therefore, $mill. 170 imports covered an equal sum of exports adding up to $ mill. 340 of mutual trade and leaving a trade surplus of $ mill. 87 equalling 20% of the total trade of $ mill. 427. 80% was, therefore, balanced by merchandise trade.

TABLE II.

*Balanced Trade as a percentage of Total Trade between Western European Countries.**

	U.K.		France		Belgium-Luxemburg		Holland		Denmark		Norway	
	1928	1938	1928	1938	1928	1928	1928	1938	1928	1938	1928	1938
U.K.	**	**	80	95	80	77	75	66	42	79	95	89
France	41	81	**	**	75	99	100	96	29	89	96	83
Belg.-Lux.	57	60	67	86	**	**	73	79	18	77	84	75
Holland	68	62	88	94	95	89	**	**	32	60	40	63
Denmark	31	58	46	75	13	80	38	80	**	**	57	75
Norway	82	85	70	88	87	80	48	88	59	100	...	...
Average	59	67	75	90	81	90	77	76	41	79	82	83

* The figures refer to merchandise trade and are taken from the Statistical returns of the countries listed on top of the table.

If a country imports from another country twice (or three times) as much as it exports the degree of mutual trading according to the above formula would still be 66 (50) per cent. When exports and imports between two countries approximately balance the table would show figures between 90 and 100. This procedure seems convenient if we deal with a series of countries over a period of time. The main purpose is to show the degree to which mutual balanced trade in merchandise has increased between the listed countries in the period 1928/38.

As mentioned in the previous article, there are considerable discrepancies between the foreign trade statistics of the importing and exporting countries referring to the yearly transactions, but in spite of the corresponding divergency in the measure of balanced merchandise trade the general tendencies become clearly visible.

While 1928 still reveals a record low of 13% mutuality in the trade between Denmark and Belgium, the lowest percentage in 1938 amounted to 58% in the trade between U.K. and Denmark. Complete or almost complete (95—99%) mutuality was achieved in 1928 in France's trade with Norway and Holland, in Holland's trade with Belgium and in the U.K.s trade with Norway. In 1938 it was the U.K. in her trade with France, France in her trade with Belgium and Holland, and Norway in her trade with Denmark which achieved a 95 to 100% degree of mutuality. More than 4/5ths of French trade with the U.K., Denmark and Norway was carried out on the same basis.

We see that between 1928 and 1938 the degree of mutuality in the U.K. trade with France and Denmark increased appreciably, while it remained practically stationary with regard to the other three countries. France distinctly tended towards greater mutuality in her trade with all countries of the group. Denmark showed an even stronger trend towards mutual adjustments, while the development in the other three countries is less clear. Holland's trade became more mutual with Denmark and Norway but not with the other countries of the group. Norway finally reduced mutual relations with the U.K., France and Belgium but increased them with Holland and Denmark.

The trend towards mutual merchandise trade is clearly discernible but by no means uniform. It is difficult to ascertain in what degree the increase in quotas and tariffs since 1928 was connected with the trend towards balanced merchandise trade. Although inter-related, both resulted from a common cause, the world depression. While quotas and tariffs were intended to mitigate the immediate effect of the slump by general trade restrictions, balanced trade relations were aimed at in order to obtain more stability of foreign trade. A guarantee of stable prosperity in U.S.A. and in the other chief industrial countries might well diminish the proportion of and trend towards balanced merchandise trade. If however, the international economic stability necessary for the unfettered development of world trade should not be assured, balanced merchandise trade will probably further increase and in this case the main task seems to be to adjust its character to the role it has to play as part of an internal policy of expansion and high employment. Limitations which may be set to such a policy by the foreign balance could be overcome by a series of trade agreements linking imports from and exports to a group of countries like those in Western Europe. This in its turn would probably lead to a more conscious adjustment of the industrial structure of the countries concerned and in this way the restrictions of the old beggar-my-neighbour and haphazard type of bi-lateralism practised in the under-employed and fluctuating economies of the thirties would be avoided.

Invisible imports and exports will, of course, considerably influence the degree to which the trade in merchandise need be balanced. However, the future magnitude of invisible items such as income from tourist traffic, shipping and air transport cannot be measured, or guessed. Owing to the great losses suffered by the West European countries in the course of the war in their power to earn foreign exchange by means other than the sale of merchandise, a trend towards a higher degree of balanced merchandise trade might be expected.

The Overseas Territories

In the decade preceding the outbreak of war the mother countries made efforts to increase trade with their overseas territories and, as the Table below shows, succeeded, with the exception of Belgium in raising not only their share of imports from and exports to, but also the total volume of trade with these areas. This adjustment did not form part of an expansionist economic policy at home and took place partly at the expense of other suppliers including some in the group of West European countries.

The share of overseas territories as markets was, again with the exception of Belgium, greater than their percentage contribution to the imports of their mother country. If we take absolute figures we notice that our Western European countries offered outlets for Empire goods

Table III.

Trade of Western European Countries with their own overseas territories, in % of their total trade.

	1928		1938	
	Imports %	Exports %	Imports %	Exports %
United Kingdom	23	40	36	44
France	13	18	27	27
Belgium	3	2	9	1
Netherlands	6	10	9	11

more rapidly than the Empire absorbed goods of the mother countries. That gave support to the economies of overseas territories but left the mother countries with growing deficits. Since, after Ottawa, Great Britain shifted a considerably greater part of her imports than of her exports from non-British to British countries, the deficits in the trade with the former were correspondingly reduced but the total trade deficit increased.

TABLE IV.

Change in Trade Deficits, 1929—1938

	With own overseas territories		With all other countries	
	in mill. gold $	in %	in mill. gold $	in %
United Kingdom*	+307	+555	—1045	—58
France	+166	+172	—216	—52
Belgium	+ 9	+ 70	— 89	—98
Netherlands	+ 18	+128	—203	—63

+ means that the deficit grew larger, — means that it grew smaller.

*Exports of U.K. to Empire Countries, 1929: £mill. 325; in 1938; £ mill. 235. Imports of U.K. from Empire Countries, 1929: £ mill. 369 ; in 1938: £ mill. 375.

The results of Ottawa demonstrate the difficulty of finding a proper terminology and statistical measure in the discussions on bi-lateral versus multi-lateral trade. In Britain's merchandise trade the degree of mutuality increased with countries outside the Ottawa system of preferential tariffs and decreased in the trade with Ottawa countries. It is doubtful if this development was intended since Ottawa had provided for reciprocal preferences in favour of U.K. exports and for the earliest possible reduction or abolition of special duties on U.K. goods. With regard to France, attempts undertaken in 1934/5 to create a French Ottawa miscarried because in certain important products the French colonies were considered to be either competitors amongst themselves or with respect to their mother-land. France restricted the imports and exports of their possessions and in many cases even the production of and transport facilities for colonial and industrial products.

In spite of the stifling influence of this kind of restrictionism on mother country and dependencies alike the West European countries continued in, and during the pre-war decade increased, their endeavour to exclude each other from their spheres of economic interest. It would probably pay a rich dividend if, for instance in Africa, instead of neighbouring regions being made the objects of diverging and often competitive economic policies of the mother countries an attempt were made to co-ordinate the measures necessary for the development of the resources and trade facilities of that continent. Investments such as roads, railways and power plants, river control and irrigation would be specially suited for combined planning. Agreement on credit facilities and on the magnitude of and priorities in the necessary capital exports would have to be reached so that current changes in the trade balances of the overseas territories concerned would not lead to a new wave of restrictionism.

TABLE V.

Percentage Share of Mother Country in the Trade of Overseas Territories with Western European Group.

(*Trade with whole group in Europe=100*)

Percentage share of mother country in trade of :—	Exports* 1928 %	Exports* 1938 %	Imports* 1928 %	Imports* 1938 %
British Dominions and India	73	84	88	89
British Colonies, Protectorates, mandates, etc.	73	86	88	92
French ditto	85	87	86	87
Belgian ditto	93	95	80	82
Dutch ditto	37	37	54	67
Total in million new gold $	3,644	2,464	3,672	1,507

*Imports from and exports to Western European Group.

Table V shows the share of the mother countries in the trade of overseas territories. Holland was the one country among the five colonial powers which shared the trade with her dependencies to a high degree with other members of the West European group, above all with France and the U.K.; Belgium left hardly any room for other countries of the group. On the whole the mother countries were slightly more important as suppliers than as customers in their territories.

The few data presented do not allow any far reaching conclusions to be drawn but they do suggest that in the pre-war decade:

1. Merchandise trade between West European powers tended towards increased mutuality.
2. Trade and above all imports shifted towards own overseas territories.
3. The mother countries tried to isolate these territories from other West European countries.
4. In the absence of co-ordinated production and of expansionist home policies shifts of trade in favour of one partner generally were of disadvantage to another partner.

It is perhaps too early to discuss the integration of still greater economic units at a time when no Colonial or Empire power has yet satisfactorily solved the problems of its associated overseas territories. But some issues may become less complicated if they are settled or at least approached on that scale which the modern development of communications and production suggests.

S. Moos.